

## EXHIBIT A

**UNITED STATES DISTRICT COURT  
DISTRICT OF MASSACHUSETTS**

MASSACHUSETTS INSTITUTE OF  
TECHNOLOGY,

Plaintiff,

V.

HARMAN INTERNATIONAL INDUSTRIES,  
INCORPORATED,

Defendant.

Civil Action No. 05-10990-DPW

## REBUTTAL EXPERT REPORT OF STEPHEN G. KUNIN

102488-494].” He states that “it is reasonable to infer that Dr. Davis as a participant and presenter at the VNIS Conference received a copy of the Conference Proceedings and was aware of the articles contained in those Proceedings, particularly those dealing directly with the subject matter of the Back Seat Driver. *See* [HAR 278710-9253].”

69. First, it is just as reasonable to infer that he was unaware of these articles, or even if he was aware, that he did not read them. More importantly, though, even if Dr. Davis were aware of the articles contained in those proceedings, a fact which Mr. Sung has not demonstrated, awareness of the articles is not synonymous with Dr. Davis being aware that such information was material to patentability of the claims of the ‘685 patent. Only where Dr. Davis would have been aware that such information was material to patentability would there have been a violation of the duty of disclosure.

**d. The Back Seat Driver Field Trials**

70. Mr. Sung at pages 18-20 of his report alleges that the Back Seat Driver research prototype was a public use of the claimed invention of the ‘685 patent more than one year prior to the August 9, 1990 filing date of the ‘274 application, and that Inventors Davis and Schmandt violated their duty of disclosure by not bringing the field trials of the Back Seat Driver to examiner Lall’s attention during the prosecution of the ‘274 application that became the ‘685 patent. Mr. Sung relies on MPEP section 2004 paragraph 11 for the proposition that the inventors or their attorney were obligated to bring prior use information to the examiner’s attention, regardless of whether such information was material to patentability. However, Mr. Sung fails to mention that the preamble to MPEP section 2004 states that “[t]hough compliance with these procedures may not be required, they are presented as helpful suggestions for avoiding duty of disclosure problems.” Thus, while the USPTO states that “[i]t may be desirable to submit information about prior uses even if it appears that they may have been experimental,

not involve the specifically claimed invention, or not encompass a completed invention,” this statement is purely advisory and creates no obligation on the part of individuals having a duty of disclosure obligation to submit non-material information to the examiner.

71. Mr. Sung states that:

The Davis thesis provides an implicit admission that the Back Seat Driver was in public use before the critical date of August 9, 1989. Indeed, the Davis thesis reveals that the ‘Back Seat Driver is an actual working prototype.’ [MIT 5754]; *see* Davis Dep. at p. 85:1-91:15; Schmandt Dep. at p. 184:1-185:8 To the extent this is an accurate statement, then the signing of this document on August 4, 1989, indicates that the patented invention was involved in an invalidating public use under 35 U.S.C. § 102(b). The statement in the Davis thesis appears corroborated by similar statements in the Davis article (“Running in prototype form since April 1989”) [MIT 938]; (“In the course of field trials ...”) [MIT 1101]; (“The Back Seat Driver is already working in prototype form”) [MIT 4078]; (“The Back Seat Driver is a research prototype ...”) [MIT 933]. In any event, the applicants’ focus on the public availability of the Davis thesis after the August 4, 1989, date of the signature on the document is irrelevant to whether the patented invention was in public use before the critical date. The materiality of these uses is not in doubt. MIT has admitted that the subject matters of claims 1-4, 7-9, 19, 21, 23-25, 32-37, 40-41, 53, 55, and 57-58 were embodied in the field trials before June 1989, and the subject matters of claims 1-4, 7-9, 15, 19, 20-21, 23-37, 40-49, 51-55, 57 and 58 were embodied in field trials that occurred before August 4, 1989. *See generally* Schmandt 30(b)(6) Dep. at p. 18-80. MIT also admits that the subject matters of claims 1-4, 7-9, 11, 21, 23-37, 40-49, 51-55, 57 and 58 were reduced to practice at least as early as June 1989, meaning that “field trials” that occurred after that date could not have been for purposes of experimentation of that subject matter. *See* Davis Dep. at p. 85:1-91:15; *See generally* Schmandt 30(b)(6) Dep. at p. 35-79. Moreover, even if the field trials for some (or even all) of the claimed subject matters were for the purposes of experimentation, the applicants were still required to disclose any experimental public uses that occurred more than one year before the filing of the application under MPEP § 2004

¶ 11. By failing to do so, the applicants failed to comply with the Rule 56 duty of disclosure.

Sung report pages 18-20.

72. I disagree with Mr. Sung that the Davis thesis is an admission that the Back Seat Driver was in public use before the critical date of August 9, 1989. Mr. Sung has not demonstrated by clear and convincing evidence that the patented invention was involved in an invalidating public use under 35 U.S.C. section 102(b). The mere fact that the Back Seat Driver prototype was tested in an automobile on a public roadway does not mean that such prototype was a public use.<sup>13</sup> As the Court of Appeals for the Federal Circuit stated in *Lough v. Brunswick Corp.*, 86 F.3d 1113, 1120 (Fed. Cir. 1996), “[t]he use of an invention by the inventor himself, or of any other person under his direction, by way of experiment, and in order to bring the invention to perfection, has never been regarded as [a public] use.” *City of Elizabeth v. American Nicholson Pavement Co.*, 97 U.S. 126, 134, 24 L.Ed. 1000 (1877).” The Back Seat Driver was used under the supervision and control of Inventor Davis. *See TP Laboratories*, 724 F.2d at 971-72. “[T]he field trials were solely for experimental purposes, performed under both the control and supervision of Dr. Davis and Mr. Schmandt, and did not disclose to the public the claimed invention. Any field trials involved Dr. Davis or Mr. Schmandt observing operation of and driver response to the Back Seat Driver. The results observed by Dr. Davis and Mr. Schmandt were not disseminated except under the control of Dr. Davis and Mr. Schmandt to a limited group of people.” [MIT’s First Supplemental Response To Harman’s Interrogatory Nos. 11-15 at page 5]. The Back Seat Driver prototype included many components including the computer system that were located in the MIT laboratory and not in the automobile prior to the August 9,

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<sup>13</sup> “An inventor who seeks to perfect his discovery may conduct extensive testing without losing his right to obtain a patent for his invention—even if such testing occurs in the public eye.” *Pfaff v. Wells Electronics, Inc.*, 525 U.S. 55, 64 (1998).

1989 critical date. [MIT 05899-903; Schmandt Dep., p. 161:3 – 162:2]. While there is no record of any confidentiality or nondisclosure agreement signed by the student drivers, the absence of such an agreement is not dispositive that use of the Back Seat Driver research prototype was in public use before the critical date. All these factors favor a finding that the Back Seat Driver research prototype was not in public use, and hence would not have been information that was material to patentability to any of the claims of the '685 patent.

73. Harman has alleged that all of the asserted claims of the '685 are unenforceable because field trials conducted by Davis and Schmandt from April 1989 through August 1989 were not cited to the U.S. Patent and Trademark Office during prosecution of the '685 patent.

74. I understand that some of the field trials were conducted using MIT undergraduate students who drove an automobile equipped with a test prototype of the Back Seat Driver system. [MIT1101; MIT06763; MIT06765]. The field trials consisted of a driver driving an automobile and a researcher, also in the car, observing the conduct and reactions of the driver. [MIT06763; MIT06765]. During the field trials, computing equipment was at the Media Lab at MIT. Schmandt Dep., p. 161:3-162:2; [MIT1101]. From the perspective of the driver, the experiment involved: (a) allowing a researcher to enter a destination via a keypad of a first cellular telephone, (b) awaiting an instruction to begin driving from the speaker of a second cellular telephone, (c) in response to receiving an instruction to begin and a first driving instruction, maneuvering the vehicle, and (d) following subsequent driving instructions. [MIT06765]. The driver never had access to or otherwise observed the operation of at least the following components of the Back Seat Driver system as claimed in the '685 patent: (a) the computing apparatus, (b) the map database, (c) the position sensing apparatus, (d) the location system, (e) the route-finder, or (f) the discourse generator. [MIT06765].

75. The researcher in the vehicle observed the output of the second cellular telephone and the driver's reaction to that output. [MIT06763; MIT06765]. The researcher made note of the driver's reaction and considered ways to improve the components of the Back Seat Driver system as a result. [MIT06763; MIT06765]. After a particular field trial ended, the researcher was able to improve the operation of the system by making changes to any of the components of the Back Seat Driver system.

76. Because the driver did not have access to at least 6 components of the Back Seat Driver system, as claimed in claim 1 of the '685 patent, there was no use by the driver of the claimed invention; instead, the driver reacted to the output of the claimed invention. Both the output and the back-end algorithms were evolving in response to the field trials. Because there was no use of the invention by the driver, axiomatically, the field trials did not amount to public use of the claimed invention. For at least this reason, the field trials were not material to the patentability of the claims of the '685 patent.<sup>14</sup> Dr. M. Elizabeth Cannon, in section IX, part J of her technical expert report, reaches this same conclusion.

77. Inventor Schmandt explained that the test subjects (MIT students) were governed by MIT policies and procedures concerning confidentiality. *See* Schmandt Dep. at p. 89:19-22. He further indicated that there were certainly efforts made to keep information about the Back Seat Driver project confidential. *See* Schmandt Dep. at p. 89:23-90:5. He further stated that:

certainly our own students and staff were certainly aware, all graduate students and staff were certainly aware of policies, as far as revealing information. That is sort of at a couple of levels. I mean in general there's publishing or making publicly available through the -- in an academic

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<sup>14</sup> In the event that the Court deems the driver's exposure to the outputs of the Back Seat Driver system to be use, such use did not occur publicly, at least because the driver was not exposed to the computing apparatus as it operated at the Media Lab during the field trials. Moreover, an observer viewing the driver maneuvering the automobile could not know that the car was being driven by a driver who was receiving real-time spoken instructions from the Back Seat Driver system.

environment you publish your own work, and other people aren't allowed to. So, it would be a violation of academic ethics if I try to publish somebody else's work, doubly so if I tried to claim ownership of it, but so it's really up to whoever does the work when and where to publish it. And, other than that, people aren't supposed to do so. In our case, we also had corporate sponsors, and we had policies in place about revealing information that those sponsors were sponsoring. And certainly our students at the Media Lab were aware of those policies. The – it wasn't a secret that – it wasn't a secret within our group that we were working on a system that had certain capabilities, and in fact some of how I worked was hardly a secret within our group, within our lab. Part of what makes the Media Lab an attractive environment for students is that there is a wide range of things that they can learn. It's an environment where they do research. It would be unfair to the students to say this work is secret, you can't know anything about it. But, the students generally understood that there is a difference between openness with each other within the confines of the building, including a car that is not in the building, obviously, and discussion with the general public.

*See* Schmandt Dep. at p. 91:1-92:8. Additionally, inventor Schmandt discussed how graduate students were given documents to sign and how undergraduates were bound by ethics guidelines.

*See* Schmandt Dep. at p. 92:9-95:9.

78. Inventor Davis in his deposition indicated that there was an obligation of confidentiality or secrecy regarding the Back Seat Driver that “applie[d] to everyone at the lab, and it's something that one understands, because it's part of the culture.” *See* Davis Dep. at p. 103:14-104:12. Moreover, Inventor Davis stated that:

No one looking at the car from outside would have any reason to suspect that there was anything unusual in the car. It's certainly not necessary to, you know, disguise the car. You can't tell from looking what's going on. So it was not necessary to do the trials only at night or something if that's what you're getting at.

*See* Davis Dep. at p. 105:2-9.



79. Consequently, in my opinion, since Mr. Sung has not demonstrated by clear and convincing evidence that the Back Seat Driver research prototype was in public use before the critical date, Inventors Davis and Schmandt and Attorney Pasternack did not violate their duty of disclosure, since the Back Seat Driver research prototype testing was not information that was material to the patentability of the claims of the '685 patent.

80. On page 20 of his report, Mr. Sung makes the argument that the materiality of these public uses is further evidenced by the patent examiner's express concern over the actual publication date of the Davis thesis solely for purposes of a 35 U.S.C. § 102(e) rejection. He also states that "the patent examiner could have properly rejected the patent claims under § 102(b) for a public use bar to patentability." In my opinion, such information does not establish *per se* the materiality of the use of a working prototype of the invention before the critical date, since Mr. Sung has not demonstrated that such use of a working prototype of the invention was in fact a public use. Moreover, in my opinion, I disagree with Mr. Sung that "the failure of the applicants to disclose these activities to the PTO constitutes inequitable conduct." Mr. Sung has neither established the materiality of such activities nor evidence of intent to deceive the examiner to support his opinion that applicants committed inequitable conduct by not disclosing the use of a working prototype of the invention before the critical date. Mr. Sung attempted to establish intent based only on an inference as opposed to hard evidence of intent to conceal the use of a working prototype of the invention, especially where the Davis thesis was disclosed to Examiner Lall and the thesis itself described the use of the Back Seat Driver as a research prototype.

#### **e. Thesis Bibliography References**

81. On page 21 of his expert report, Mr. Sung indicates that the "Davis thesis' bibliography" "contains 88 references" that were "material and not provided to the PTO".

However, Mr. Sung has not demonstrated how or why any of these 88 references were material to patentability. Indeed, when reviewing the list of documents that Mr. Sung indicated that he considered when preparing his expert report, it appears that he did not himself review the 88 references to determine whether they were not cumulative. He indicates that “[t]he inclusion of these articles in the bibliography of the Davis thesis is not a proper disclosure to the PTO.” He further states that “[t]hese references should have been specifically and separately disclosed to the PTO in the IDS.” However, 37 C.F.R. section 1.56 does not require that information that is not material to patentability be disclosed to the USPTO. In my opinion, since Mr. Sung has not demonstrated that any of these 88 references were material to patentability, I do not see how he can conclude that there was a violation of the duty of disclosure. “If the information allegedly withheld is not as pertinent as that considered by the examiner, or is merely cumulative to that considered by the examiner, such information is not material.” *See Molins PLC v. Textron Inc.*, 48 F.3d 1172, 1179 (Fed. Cir. 1995) (citation omitted). Consequently, in order to satisfy their duty of disclosure, Inventors Davis and Schmandt and Attorney Pasternack were not required to specifically and separately disclose to the USPTO in the IDS these references since they have not been demonstrated to have been material to patentability.

**f. Failure to Provide Relevant Publications**

82. On pages 21-22 of his report, Mr. Sung indicates that copies of several references that were listed in the IDS were not provided to Examiner Lall during the prosecution of the ‘274 application. He states that “the applicants never provided these references to the PTO even though these references were specifically designated as material to the examiner for use in his determination of the novelty of the invention.” I disagree with Mr. Sung’s assessment that these references were “specifically designated as material.” Mr. Sung has not demonstrated how any of these references were in fact material to patentability. He has not compared these references

to patentability. In my opinion neither the characterization of the CARIN system in the IDS nor the failure to disclose the CARIN system were inequitable conduct.

- Mr. Sung has not established by clear and convincing evidence that there was a public use either under 35 U.S.C. § 102(b), or 35 U.S.C. § 103(a) based upon 35 U.S.C. § 102(b), of the inventions covered by the claims of the '685 patent. In my opinion the failure to disclose the Back Driver Field Trials was not inequitable conduct.
- Mr. Sung has not established by clear and convincing evidence that Inventors Davis and Schmandt or Attorney Pasternack violated the duty of disclosure in failing to bring to Examiner Lall's attention the thesis bibliography references not cited in an IDS or to provide copies of publications that were listed in the IDS. In my opinion the failure to disclose the Davis thesis bibliography references and other articles incorporated by reference into the '685 patent was not inequitable conduct.

#### **VIII. RIGHT TO SUPPLEMENT OR AMEND**

85. I reserve the right to supplement and/or amend the opinions expressed herein in response to positions taken by Harman or Harman's experts, to amplify what is stated above, where necessary, and especially in view of information not presently known to me or new information presented by Harman's experts prior to, or at trial, and to supplement this report should additional information be brought to my attention during the course of this proceeding.

Dated: August 22, 2006

  
 Stephen G. Kunin

## EXHIBIT B

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF MASSACHUSETTS

MASSACHUSETTS INSTITUTE OF  
TECHNOLOGY

Plaintiff,

V.

HARMAN INTERNATIONAL  
INDUSTRIES INCORPORATED.

Defendant

Case No. 05-10990-DPW

**SUPPLEMENTAL REBUTTAL EXPERT REPORT OF STEPHEN G. KUNIN**

## **I. INTRODUCTION**

1. In view of the filing of a Supplemental Expert Report of Lawrence M. Sung dated November 9, 2006, I submit this supplemental rebuttal report pursuant to Fed. R. Civ. P. 26(e). I have concluded that Mr. Sung has not demonstrated by clear and convincing evidence that there are any additional grounds upon which a finding would be supported that any individual having a duty of disclosure obligation engaged in inequitable conduct in the prosecution of the '685 patent application. I continue to reserve the right to supplement my opinions should additional evidence be produced.

## **II. INFORMATION RELIED UPON**

2. My opinions in this supplemental rebuttal report are based upon the information produced since my deposition of August 28, 2006. These materials, except for the Supplemental Expert Report of Lawrence M. Sung, are listed in the Exhibit attached to this report.

## **III. ANALYSIS**

3. Mr. Sung has not demonstrated by clear and convincing evidence that the Davis thesis was material. Mr. Sung has not proven that the Davis thesis is prior art that would have rendered the claimed invention in the '685 patent *prima facie* unpatentable.

4. The '685 patent was properly granted over the Davis thesis since the thesis was not "available to the public" before the August 9, 1989 critical date. Mr. Sung has not established that any of the individuals having a duty of disclosure obligation in connection with the prosecution of the '685 patent made a material misrepresentation of fact. The newly produced documents do not support a finding that the Davis thesis was made available to the public before the critical date.

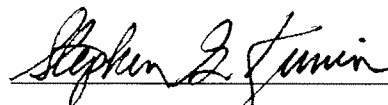
5. First, the claimed subject matter does not appear to have been made "available to the public" more than one year prior to the filing date of the application that became the '685 patent. Mr. Sung has not demonstrated by clear and convincing evidence that James R. Davis presented his thesis on May 26, 1989 at 4:00 p.m., or how it was material to patentability. A draft flyer having a subject title "Telling You Where To Go," different from the title of the Davis thesis "Back Seat Driver: voice assisted automobile navigation" is not proof that a thesis defense took place on May

26, 1989. *See* HAR 709861. Mr. Sung cites to no evidence as to what actually occurred on May 26, 1989, and no evidence that there was publication of the Davis thesis on that date.

6. Second, Mr. Sung has not demonstrated by clear and convincing evidence that Dr. Davis' thesis was made "available to the public" through publication and/or by non-confidential circulation to third parties more than one year before the filing date of the application that lead to the issuance of the '685 patent. Dr. Lynn A. Streeter indicated that she could not recall when she received the Davis thesis. *See* Deposition of Lynn A. Streeter at 8:16-9:1; 115:11-116:3. Dr. Streeter's deposition testimony does not controvert that individuals shown Dr. Davis' work would have understood that the material was not for public distribution. Mr. Sung has not established by clear and convincing evidence that Dr. Streeter received any Davis thesis documents before the Davis thesis was completed.

7. Third, the subject matter of the thesis was not made "available to the public" by virtue of demonstrations of the prototype more than one year prior to the filing date of the application that became the '685 patent. It is not clear to me what evidence Mr. Sung relies on when concluding that Gregory Grove, Michael Lesk and representatives from NEC witnessed a public use of the claimed invention, since it appears that any such disclosures would have been made to persons understanding that the disclosures were not for public dissemination, including the disclosures to NEC, who was a sponsor and later licensee of the technology. *See* MIT 07377-07381. The mere fact that persons closely associated with Dr. Davis were given demonstrations of the Back Seat Driver, with an implied understanding of the confidentiality of such disclosures, does not mean that Davis' work as detailed in his thesis was "available to the public" before the critical date. *See* Deposition of James Davis at 103:14-104:12; 105:2-9 and Deposition of Christopher Schmandt at 89:19-22; 89:23-90:5; 91:1-92:8; 92:9-95:9. It is not the number of people to whom the claimed invention was demonstrated that counts—it is whether there was an active disclosure of the claimed invention to the public before the critical date that is important.

Dated this 28 day of November 2006



Stephen G. Kunin